

REVIEWS.

ART. XIX.—*A Treatise on Diseases of the Nervous System.* By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System and of Clinical Medicine in Bellevue Hospital Medical College; Physician-in-Chief to the New York State Hospital for Diseases of the Nervous System, etc. With forty-five illustrations. 8vo. pp. 754. New York: D. Appleton & Co., 1871.

PERHAPS the most decided general impression one gets from reading Dr. Hammond's book is that of his extreme positiveness. The reader wishes he "could be as sure of anything as Dr. Hammond is of everything," for it is very comforting in these days to know that any medical, and especially therapeutic, matter has been "placed beyond the possibility of a doubt." But it is more than doubtful whether this is warranted by the present state of science, great as have been its advances in the last few years in the field of nervous physiology and pathology; and although the author tells us that his opinions are largely founded on his own experience, he does not inform us how he arrived at those opinions, with details sufficiently convincing to entirely remove in his readers the hesitation he never seems to feel himself, and we think the impression is likely to be that his positiveness arises from his own mental constitution rather than from the character of his facts, so that after all we must depend for our proofs on what was previously known, unless we wish to take, instead of proof, the author's *ipse dixit*.

Pathology forms no exception to this rule, but pathology, and especially pathological anatomy, are very far from being the strong points of this book, the latter class of data being singularly meagre in comparison with the large numbers of rare cases mentioned.

The work is divided into five sections, and an introductory upon instruments for diagnosis and treatment. The first section treats of diseases of the brain.

In the first two chapters the opposite conditions of cerebral congestion and cerebral anæmia are described. Although it is admitted that their diagnosis may not always be certain, yet the line between them is sharply drawn, the diagnosis principally resting on the condition of such portions of the circulation as are accessible to observation, including the fundus oculi as seen by the ophthalmoscope, as well as on the condition of the pupils, the existence of drowsiness or wakefulness, and the character of the accompanying headache. We find, however, although the fact that these two opposite conditions resemble each other in many symptoms is stated, no mention of the reason, which is, as Niemeyer justly states, that the conditions of passive hyperæmia and anæmia are both alike in a most essential point, preventing the access of freshly oxygenated and nourishing blood to the nerve cells.

The two chapters on cerebral and meningeal hemorrhage present no features calling for special remarks.

Chapter V. is upon partial cerebral anæmia from obliteration of cerebral arteries; and

Chapter VI. is upon the softening consequent upon these accidents, or occurring independently. It is of interest to note that Dr. Hammond's explanation of the cause of congestion of the retina in a case of embolism differs materially from that given by the reporter of the case quoted by him from the *British Medical Journal*. Dr. Hammond says that stopping up the middle cerebral artery forces more blood into the other branches of the internal carotid, of which the ophthalmic is one, thus the increase of blood in the eye denoting its diminution in the brain. The reporter of the case referred to supposes the intense congestion of the retina to denote a similar condition of the brain, and the latter explanation corresponds much more exactly with our author's usual theory. If, however, retinal congestion means both anæmia and hyperæmia, the value of the ophthalmoscope in diagnosis cannot be quite so great as it is represented.

The chapter on aphasia is useful as defining how this term should and should not be applied. The pathology is briefly and clearly summed up as follows:—

"The gray matter of the lobes presides over the *idea* of language, and hence over the memory of words. When it only is involved, there is no hemiplegia, and there is no difficulty of articulation. The trouble is altogether as regards the memory of words.

"The corpus striatum contains the fibres which come from the anterior column of the spinal cord, and is besides connected with the hemisphere. A lesion, therefore, of this ganglion, or other part of the motor tract, causes paralysis of motion on the opposite side of the body. The cases I have detailed show, without exception, that the power of co-ordinating the muscles of speech is directly associated with this hemiplegia. A lesion, therefore, followed by hemiplegia and ataxic aphasia, indicates the motor tract as the seat. If amnesic aphasia is also present, the hemisphere is likewise involved."

The next six chapters are upon inflammation of the brain and meninges, and diffused and multiple cerebral sclerosis, the latter of which the author was the first to recognize as a distinct disease. Since the author differs decidedly from a physician with so large an experience as Dr. Flint, in regard to the frequency of cerebral rheumatism, a report of a case or two, with an autopsy, would carry more weight than a simple expression of opinion.

The next chapter is devoted to tumours of the brain.

Sixty pages treat of insanity. It is hardly necessary to remark that the professed alienist is not likely to increase his knowledge or correct his views by such a cursory glance, and the general practitioner, for whose instruction the book seems chiefly designed, would probably find this chapter entirely inadequate and unsatisfactory. It reads more as if written for some compendium or handbook to be used by students in preparing for an examination than as a part of a treatise for the instruction of scientific men.

Even the general practitioner, if familiar only with the criminal trials reported in the daily papers, must be fully aware that the diagnosis of insanity, making the fullest allowance for all the "ometers," "scopes," and "graphs" of modern science, is not always easy, and cannot be very thoroughly treated in fourteen lines. He (the general practitioner) might

hesitate also to accept without reservation the proposition so positively stated, that "the insanity of women generally has a reflex origin." While admitting its truth if only a "sometimes" were substituted for the "generally," he might fail to see why the female brain, though differing from the male slightly in average size, and possibly also in texture, should be regarded by some specialists as an organ fitted solely for the reception and "reflection" of morbid sensations from the pelvis, and wonder why the female thinking machine, more delicate, it is true, in its emotional part, but acting in the same way and with the same activity on the same subjects, should not be liable to derangement from the same causes. What makes this curt statement the more surprising is the eminently sensible view taken by the author of the causation of hysteria (p. 629), which, he says, is "probably the result of the delicacy of organization, and greater development of the emotional system, acted upon by the exciting causes to be presently mentioned," the latter arising by no means wholly or chiefly from the sexual region.

It certainly seems, if hysteria can find not only its predisposing but its exciting causes elsewhere than in the sexual organs, that, *à fortiori*, insanity, a disease to which men are even more liable than women, might also do so.

We observe that our author does not admit the existence of temporary insanity, or mania transitoria, as it has been supposed to exist in some recent criminal cases, notably that of Andrews. He says that the

"height of the paroxysm is always preceded by symptoms of mental aberration, and that, though the patient may subside into a condition of comparative sanity, the evidences of disease are still present, and remain in him for days, weeks, and even months and years. The symptoms are generally those of cerebral congestion."

Section II. treats of diseases of the spinal cord. The most important and interesting of the eleven chapters is that upon spinal anæmia, of which the author makes two divisions: 1st, anæmia of posterior columns, or spinal irritation; and 2d, anæmia of antero-lateral columns, often giving rise to reflex paralysis, and especially reflex paraplegia. The former of these affections, which seems likely, under Dr. Hammond's patronage, to come somewhat into fashion again, and, without being, as before, "all the rage," to assume more nearly its proper position in pathology, is diagnosed principally by the existence of cutaneous hyperæsthesia at some point over the spinous processes of the vertebræ. A more deep-seated pain, however, may often be detected by suitable manipulation. Dr. Hammond admits the want of anatomical evidence, which, for many and obvious reasons, is extremely difficult to procure, in favour of his view of the pathology, but considers it sufficiently established by clinical and therapeutic data.

In regard to reflex paralysis, the author accepts in a measure both Brown-Séquard's theory of vaso-motor spasm, and Dr. Mitchell's of exhaustion of nervous centres.

The chapters on hemorrhage, and inflammation of the cord and its membranes; spinal softening, sclerosis of the antero-lateral and posterior columns of the spinal cord, tumours, and secondary degenerations of the cord; and tetanus, present no features of novelty.

Muscular contractions coming on *late* in paralysis, are attributed, following Bouchard, to secondary changes in the cord, and not to irritation existing at the seat of the original lesion.

Section III. is devoted to the consideration of cerebro-spinal diseases, namely, hydrophobia, epilepsy, catalepsy, ecstasy, chorea, hysteria, multiple cerebro-spinal sclerosis, and athetosis.

The chapter on hysteria we have before adverted to for the soundness of its views. We are, however, inclined to think that most physicians would have a good deal less confidence in drugs for its treatment than Dr. Hammond seems to have, though he speaks with no respect of the classical "antispasmodics." "For putting an hysterical patient into a proper frame of mind, he knows nothing equal to the bromides."

The most noticeable among the remaining chapters is that upon athetosis, which is a heretofore undescribed disease, "mainly characterized by an inability to retain the fingers and toes in any position in which they may be placed, and by their continual motion." "Its analogies are with chorea and cerebro-spinal sclerosis, but it is clearly neither of these diseases." Dr. Hammond has himself seen one case of this disease, and had a minute description, with photographs, of another.

Section IV. includes an interesting group of diseases, characterized by degeneration and atrophy of nerve cells in the nerve centres. The cells affected may be either "trophic" (progressive muscular atrophy), motor (glosso-labio-laryngeal paralysis), or both (organic infantile paralysis, hypertrophy of muscular connective tissue).

We think that such a classification must be regarded as merely provisional, for, until we know more accurately the limits within which muscular nutrition is affected by exercise and the variations of blood supply, we ought not to assume too confidently the existence of a class of nerves or nerve cells for which there is absolutely no anatomical, and very far from conclusive physiological, evidence.

Chapter IV. of this section is upon functional derangements of motor nerve cells (paralysis agitans, writers' spasm, and lead paralysis).

Section V., upon diseases of peripheral nerves, is too short to be at all satisfactory, and is apparently inserted for the sake of systematic completeness.

There are but few original views advanced in the work whose contents we have just indicated, but the recent theories are stated with the greatest confidence as fixed acquisitions of science. One of the most noticeable features is the extent to which "all the modern improvements" are made to do service in diagnosis and therapeutics. The ophthalmoscope has for some time been recognized as of great value in diagnosing certain organic diseases of the brain affecting the circulation in the retina, but we think no one before Dr. Hammond has relied so fully on the observation of hyperæmia or anæmia of the fundus oculi to prove the existence of the same condition in the cerebrum.

In the department of therapeutics, which is evidently the point where Dr. Hammond relies most firmly on his own experience, the peculiar characteristics of the book are most strongly marked. A good example of his hasty and confident style is found in the following short sentence from page 747, the subject being the treatment of neuralgia: "If rheumatism be clearly made out, the blood should at once be rendered alkaline by liquor potassæ." Now, the blood is very seldom, if ever, otherwise than alkaline, even in rheumatism; next, the alkaline treatment is no specific even for rheumatic fever, and much less for the subacute or chronic form, with which the neuralgia is more likely to be associated; and lastly, if the

blood is to be made (more) alkaline, liquor potassæ is not the best thing to do it with.

The bromides, and especially the bromide of lithium, are agents upon which our author places special reliance. His experience would certainly tend to disprove the theory that bromide of potassium is active only as a potassium salt, and not as a bromide. In epilepsy, he would use them so as to produce well-marked bromic cachexia as soon as possible, and not suspend their exhibition until "the phenomena are sufficiently well marked to excite the gravest apprehensions" of the practitioner.

If the bromides are useful in catalepsy, where there is reason to suppose that the brain and cord are in a state of anæmia, would it not indicate that these drugs have some action beyond that of diminishing the blood in the nervous centres?

Other remedies in which he places great confidence are phosphorus, especially in the form of phosphide of zinc, other zinc salts, chloride of barium, nitrate of silver, ergot, and strychnia.

Last, but not least, we mention the galvanic current, and it is greatly to be regretted that the author has not given us more detailed facts beyond the mere statement of benefit received, in regard to this powerful agent, which, notwithstanding the number of books which have lately appeared, needs much more light thrown upon it. In the treatment of cerebral congestion, the author uses the constant current, both by application more or less exactly over the sympathetic, and by direct application over the mastoid processes. He says, "observation with this instrument [ophthalmoscope], while the current is acting, shows that the vessels of the retina contract, and hence there can be no doubt that the result is produced upon those of the brain." With all due respect, we think there *can* be a doubt, since it has been shown experimentally (by Nothnagel) that a portion of the vaso-motor nerves of the brain leave the cerebro-spinal axis somewhere above the roots of the superior cervical ganglion. This makes no difference, to be sure, on a theory which, we think, has a good deal to support it, namely, that the so-called galvanization of the sympathetic is really of no greater efficacy than arises from the cutaneous excitation involved, and that phenomena following it are of reflex origin; but if it is supposed that the whole or a large part of the current passes through the sympathetic nerve and no other, a supposition which an anatomist might find some difficulty in accepting, the nervous distribution just mentioned would furnish a very good reason why we cannot be quite sure of what passes in the brain by what we see in the eye. It would also be interesting to know, if the galvanic current possesses the power of picking out the sympathetic from among the nerves and other structures of the neck, how it is confined to the pneumogastric when one conductor is placed upon the neck and the other rubbed over the epigastrium, where the sympathetic possesses as extensive a distribution as the pneumogastric, to say nothing of the great solar plexus. We can easily believe our author when he states that Boudault's pepsine is more efficacious in the relief of gastric derangements than the proceeding just described.

With regard to the printer's work, it is of course good, but we cannot say as much for the engraver. His work is in about the style of a third or fourth class weekly illustrated paper. The lady (page 364) on whose countenance apprehension and terror are said to be clearly depicted, seems to us to wear an expression of utter vacuity or indifference, while on the opposite page the engraver has atoned for his failure to give the required

expression by representing with great fidelity to the photograph, the apparent elephantine size of the hands.

Nearly all the portraits, including that of the patient with spinal meningitis on page 453, are characterized by an expression of serenity and composure which speaks volumes for the skill of the symptomatic treatment, even if the therapeutics, in the stricter sense of the word, have failed.

We opine also that the two engravings of sections of spinal cord are not the two to which Dr. Lockhart Clarke would like best to see his name attached, and that a diagram which may do very well for the pages of a weekly journal is hardly worthy a place in a formal treatise.

This department is guilty of omissions as well as commissions. Some of the outlines of sections of spinal cord from the *Archives de Physiologie*, which the engraver could not very well have spoiled, would have been quite as useful in the fourth section as the sketch on page 704, which looks like one of Mr. Ruskin's pre-Raphaelite foregrounds.

In conclusion, we have only to say that this book, which is the fruit, but not well-ripened fruit, of a large experience and extensive physiological research, notwithstanding its faults, which affect its scientific rather than its practical merits, cannot help being useful; but we do think that a physician of the high scientific attainments and unequalled opportunities of the author, owes to the profession a better work than the one under notice.

R. T. E.

ART. XX.—*Essay on Growths in the Larynx: with Reports and an Analysis of One Hundred consecutive Cases treated by the Author, and a Tabular Statement of all Published Cases treated by other Practitioners since the invention of the Laryngoscope.* By MORELL MACKENZIE, M.D. London, M.R.C.P., Physician to the Hospital for Diseases of the Throat, and to the Royal Society of Musicians; and Senior Assistant-Physician, and Lecturer on Diseases of the Throat, at the London Hospital. With numerous Illustrations in Chromo-Lithography and Wood-Engraving. 8vo. pp. xii., 263. Philadelphia: Lindsay & Blakiston, 1871.

THE demonstrations of Professor Czermak, during his tour in Europe, after his conviction of the practicability of the laryngoscope in elucidating the physiology and pathology of the larynx, cannot fail to be recalled with the highest gratification by those who were fortunate enough to witness them. This tour, indeed, it may safely be predicted, will always have an historical interest, for it is undoubtedly true that, "notwithstanding the beautiful simplicity effected by Czermak in the details of the laryngoscope, the profession might not have become impressed with the value of the instrument, had not his brilliant demonstrations delighted and astonished Europe."

Many of the physicians who were privileged to meet Professor Czermak were already zealous students of the diseases of the throat and larynx, and they eagerly seized upon the laryngoscope as the long-sought means of bringing into the range of external pathology the conditions which

¹ "The Use of the Laryngoscope." Mackenzie.